ABSTRACT

A method and apparatus for multiple string searching using a ternary content addressable memory. For one embodiment, the method includes receiving a text string having a plurality of characters and performing an unanchored search of a database of a stored patterns matching one or more characters of the text string using a state machine, wherein the state machine comprises a ternary content addressable memory (CAM) and wherein the performing comprises comparing a state and one of the plurality of characters with contents of a state field and a character field, respectively, stored in the ternary CAM. In various embodiments, one or more of the following search features may be supported: exact string matching, inexact string matching, single character wildcard matching, multiple character wildcard matching, case insensitive matching, parallel matching and rollback.